

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.: 10/669,931	§	Examiner: Puente, Emerson C.
Filed: September 24, 2003	§	Group/Art Unit: 2113
Inventor(s):	§	Atty. Dkt. No: 5760-13900/VRTS
Hans F. van Rietschote, Mahesh	§	0394
P. Saptarshi, and Craig W. Hobbs	§	
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Title: Providing High Availability	§	
for an Application by	§	
Rapidly Provisioning a	§	
Node and Failing Over to	§	
the Node	§	
	§	
	§	

PREAPPEAL BRIEF REQUEST FOR REVIEW

MAIL STOP AF

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Applicants request review of the final rejection in the above-identified application. No amendments are being filed with this request. This request is being filed with a notice of appeal. Independent claims 1, 19, and 31 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Vert et al., U.S. Patent No. 6,360,331 ("Vert") in view of Mashayekhi et al., U.S. Patent No. 6,922,791 ("Mashayekhi"). Independent claim 16 is rejected under 35 U.S.C. § 102(e) as being anticipated by Harper et al., U.S. Patent No. 6,629,266 ("Harper"). Applicants set forth the clear errors in the rejections below.

Please note that for brevity, only the primary arguments directed mainly to the independent claims are presented, and that additional arguments, e.g., directed to the subject matter of the dependent claims, will be presented if and when the case proceeds to Appeal.

Claims 1, 19, and 31

Applicants respectfully submit that each of claims 1-8, 10-15, 18-25, 27-34, and 36-41 recite combinations of features not taught or suggested in the cited art. For example, claim 1 recites a combination of features including: "detecting that an application in a first node is to failover, wherein the first node is included in a cluster being used to execute the application; adding a second node to the cluster responsive to the detecting; provisioning the second node to execute the application responsive to the detecting".

The Office Action alleges that Mashayekhi teaches the above highlighted features at col. 2, lines 60-67, asserting that the Examiner interprets "cluster" in the claims to be a cluster of active nodes as described in Mashayekhi. Applicants respectfully disagree. The interpretation asserted by the Office Action is clearly contradicted by the plain language in Mashayekhi, in which the passive node is clearly part of the cluster and there is no cluster of active nodes that excludes the passive node of Mashayekhi. For example, Mashayekhi teaches: "Another known failover policy utilizes a separate 'passive' node that is present in the cluster exclusively for the purpose of being the failover node for all active nodes in the cluster. As illustrated in the following graph, each node on the cluster that is actively running applications (nodes 1-3) fails over to node 4, which is not tasked with running any applications other than in the event of a failover." (Mashayekhi, col. 2, lines 60-67). Thus, it is clear that Mashayekhi's cluster is four nodes, three of which are active and one of which is passive. All four nodes are clearly part of the cluster, and the passive node is provisioned *a priori* to execute any application from nodes 1 to 3 in the event of a failover. Thus, in the cited section, all that occurs when a failover event is detected is the act of failing over itself.

Accordingly, the cited section of Mashayekhi does not teach or suggest "detecting that an application in a first node is to failover, wherein the first node is included in a cluster being used to execute the application; adding a second node to the cluster responsive to the detecting; provisioning the second node to execute the application responsive to the detecting" as recited in claim 1. Vert does not teach or suggest the

above highlighted features, either. Accordingly, the alleged combination of Vert and Mashayekhi does not teach or suggest the combination of features recited in claim 1.

Claim 19 recites a combination of features including: "detect that an application in a first node is to failover...add a second node to the cluster responsive to detecting that the application is to failover; provision the second node to execute the application responsive to detecting that the application is to failover". The same teachings of Vert and Mashayekhi highlighted above with regard to claim 1 are alleged to teach the above highlighted features of claim 19. Applicants respectfully submit that Vert and Mashayekhi do not teach or suggest the above highlighted features, either. Accordingly, claim 19 is patentable over the cited art.

Claim 31 recites a combination of features including: "a third node is configured to be provisioned to execute the application...wherein the third node is added to the cluster responsive to the detection that the application is to failover from the second node during use". The same teachings of Vert and Mashayekhi highlighted above with regard to claim 1 are alleged to teach the above highlighted features of claim 31. Applicants respectfully submit that Vert and Mashayekhi do not teach or suggest the above highlighted features, either. Accordingly, claim 31 is patentable over the cited art.

Claims 2-8, 10-15, 18, and 39 depend from claim 1 and thus are patentable over the cited art for at least the above stated reasons as well. Each of claims 2-8, 10-15, 18, and 39 recite additional combinations of features not taught or suggested in the cited art. Claims 20-25, 27-30, and 40 depend from claim 19 and thus are patentable over the cited art for at least the above stated reasons as well. Each of claims 20-25, 27-30, and 40 recite additional combinations of features not taught or suggested in the cited art. Claims 32-34, 36-38, and 41 depend from claim 31 and thus are patentable over the cited art for at least the above stated reasons as well. Each of claims 32-34, 36-38, and 41 recite additional combinations of features not taught or suggested in the cited art.

Claims 16-17

Applicants respectfully submit that each of claims 16-17 recite combinations of features not taught or suggested in the cited art. For example, claim 16 recites a combination of features including: "detecting that an application in a first node is to failover; provisioning a second node to execute the application responsive to the detecting".

The Office Action asserts that Harper teaches the above highlighted features, citing col. 8, lines 11-16. However, these teachings are: "If the determination in step 502 is 'YES' (e.g., if the fail-to node can accept failover workload), then in step 505, the rejuvenation agent on the primary node instructs the cluster manager to gracefully (e.g., in a planned way) shut down the application on the primary node and in step 506 to restart the application on the secondary node." These teachings relate to failing over the node to an (already provisioned) secondary node. These teachings have nothing to do with the provisioning features recited in claim 16.

Harper teaches that the primary node and the secondary (or backup) node are both configured to execute the application when the cluster is created. See, e.g., col. 6, lines 32-42: "Typically, in a two-node cluster, one node is designated the 'primary node' and normally runs the application software, and another is designated the 'backup node' and is capable of running the application when the primary node fails. Distributed cluster management software running on both the primary node and the secondary node continually checks on the health of the primary node and its associated application software."

For at least the above stated reasons, Applicants submit that claim 16 is patentable over the cited art. Claim 17, dependent from claim 16, is similarly patentable over the cited art and recites additional combinations of features not taught or suggested in the cited art.

CONCLUSION

Applicants submit that the application is in condition for allowance, and an early notice to that effect is requested.

If any extensions of time (under 37 C.F.R. § 1.136) are necessary to prevent the above referenced application(s) from becoming abandoned, Applicant(s) hereby petition for such extensions. If any fees are due, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert, & Goetzel, P.C. Deposit Account No. 501505/5760-13900/LJM.

Respectfully submitted,

/Lawrence J. Merkel/

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